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#### **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

Τo

Assistant Commissioner for Patents United States Patent and Trademark Office Box PCT Washington, D.C.20231

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Applicant

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# WIPO PCT INTERNATIONAL PRELIMINARY EXAMINATION REPORT

# (PCT Article 36 and Rule 70)

Applicant's o	or agent's file reference		See Notific	eation of Transmittal of International
PCT/2000	)/032	FOR FURTHER ACTION		Examination Report (Form PCT/IPEA/416)
1	application No.	International filing date (day/mon	th/year)	Priority date (day/month/year)
PCT/ZA00	0/00022	10/02/2000		11/02/1999
International F41A17/0		tional classification and IPC		
Applicant	Ρ.			
AFRICA C	OUTDOORS ACS (PRORIE	ETARY) LIMITED et al.		
	ternational preliminary exami transmitted to the applicant a		d by this Inte	ernational Preliminary Examining Authority
2. This R	EPORT consists of a total of	5 sheets, including this cover	sheet.	
be (se	en amended and are the bas	sis for this report and/or sheets 07 of the Administrative Instruct	containing re	n, claims and/or drawings which have ctifications made before this Authority ne PCT).
ı	eport contains indications relat  Basis of the report	ting to the following items:		
	☐ Priority			
III IV	<ul><li>☐ Non-establishment of op</li><li>☐ Lack of unity of invention</li></ul>	pinion with regard to novelty, in	ventive step	and industrial applicability
V	⊠ Reasoned statement un		novelty, inve	entive step or industrial applicability;
VI	☐ Certain documents cite	· •		
VII	☐ Certain defects in the in	ternational application		
VIII	☐ Certain observations on	the international application		
Date of subm	nission of the demand	Date of	completion of	this report
07/09/200	0	11.04.2	2001	
preliminary e	nailing address of the international examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656	Spine	zed officer	STATE OF STA

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/ZA00/00022

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1.	the and	receiving Office in	nents of the international applic response to an invitation under to this report since they do not c	Article 14 are	referred to in this repo	ort as "originally filed"
	2-1	7	as originally filed			
	1,1	a-1b	as received on	30/03/2001	with letter of	30/03/2001
	Cla	ims, No.:				
	1-2	3	as received on	30/03/2001	with letter of	30/03/2001
	Dra	wings, sheets:				
	1/3-	-3/3	as originally filed			
2.	lang	guage in which the	juage, all the elements marked international application was file available or furnished to this Au	ed, unless othe	erwise indicated unde	
		the language of a	translation furnished for the pu	rnoses of the i	nternational search (u	nder Rule 23 1/h))
			ublication of the international ap	•	·	nder Fidie 25. 1(b)).
		the language of a	translation furnished for the pu	•	, ,,	xamination (under Rule
		55.2 and/or 55.3).				
3.			eleotide and/or amino acid ser y examination was carried out			
		contained in the in	ternational application in writter	n form.		
		filed together with	the international application in	computer read	able form.	
		furnished subsequ	ently to this Authority in written	form.		
		furnished subsequ	ently to this Authority in compu	ter readable fo	orm.	
			t the subsequently furnished wo	-	e listing does not go b	eyond the disclosure in
		The statement tha listing has been fu	t the information recorded in co	mputer readal	ole form is identical to	the written sequence
4.	The	amendments have	resulted in the cancellation of:			



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/ZA00/00022

		the description,	pages:		
		the claims,	Nos.:		
		the drawings,	sheets:		
5.					ome of) the amendments had not been made, since they have been as filed (Rule 70.2(c)):
		(Any replacement sho report.)	eet contail	ning such	amendments must be referred to under item 1 and annexed to this
6.	Add	litional observations, if	necessar	y:	
V.		soned statement und tions and explanatio			ith regard to novelty, inventive step or industrial applicability;
1.	Stat	ement			
	Nov	elty (N)	Yes: No:	Claims Claims	1,2,6-19,23
	Inve	entive step (IS)	Yes: No:	Claims Claims	3-5,20-22
	Indu	strial applicability (IA)	Yes: No:	Claims Claims	1-23

2. Citations and explanations see separate sheet

#### Part V.

- 1.1 According to document D1=WO-A-98 55 817 it is known (see page 2, line 19-page 4, line 9; page 5, line 31-page 6, line 29) a firearm device comprising a conventional firearm 10, a safety means 18 for impeding an unauthorised person to fire the firearm and an information storage means 19 storing a unique code relating to each projectile fired for recording and storing that group of aspects:

  an image in the direction in which a shot in use is fired (page 3, lines 27-page 4, line 3):
  - a sound about the time when a shot is in use fired (page 3, lines 15,16, line 33-page 4, line 3).
  - The subject-matter of claims 1 and 2 is anticipated by document D1 disclosure, hence claims 1 and 2 do not satisfy Art. 33(2) PCT prescriptions.
- 1.2 The further means recited in claism 6 to 19 are additional embodiments of the device claimed in clause 1 already contemplated by document D1 (see passages above) and do not add novelty to the subject-matter of said claim 1 on which claims 6 to 19 are dependents: claims 6 to 19 are not in accordance with Art.33(2) PCT prescriptions.
- 1.3 The subject-matter of claim 23 lacks novelkty in respect of the disclosure of document D1, i.e. in the device according to document D1 are included (see particularly page 2, lines 25-31) gathering means defining an information carrier means separable from the firearm device whereon information can be recorded and an information gathering means for gathering information from the person to use the firearm: claim 20 is contrary to Art.33(2) PCT conditions.
- 2. The ancillary features of:
  - claims 3 to 5 have been previously conceived by prior art document D2=WO-A-95 11 419 with reference to fig.1, 2; description page 1, line 1-page 2, line 16; and respectively to signs 50,52; 60; 24,38,40.
  - claims 20-22 are already part of the field knowledge as disclosed by document D3=US-A-4 309 095 (see particularly fig.1; description column 2, lines 17-33, column 3, lines 22-45 and respectively reference signs 12,30; 10,18-28; 32.

### INTERNATIONAL PRELIMINARY **EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/ZA00/00022

The combination of the findings of document D1 together with that of document

PCT: claims 3 to 5 and 17 to 19 are not compliant with the relevant conditions.

D2 or D3 do not constitute an appreciable inventive step in the sense of Art.33(3)

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#### **FIREARM**

#### Technical Field

5 This invention relates to a firearm device.

### **Background Art**

It is well known that firearms are often misused, not only by unauthorised users, but also by owners of the firearms. This misuse leads to opposition to the use and carry of firearms. There is accordingly a great need for a firearm that is less attractive to be stolen, and more difficult to be used by unauthorised persons. At the same time it would also be a huge advantage if the firearm could in some way discourage misuse thereof.

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International patent application number PCT/AU98/00413 discloses security measures for electronically operated ammunition and firearms such as pistols. The electronic controls of the pistol disclosed herein may be armed or disarmed electronically and includes encoding means which arms the electronic controls to "enable firing of the secured weapon upon the monitoring authorized code". This code may be electronically personalized to the

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provided on a swipe card or the like carried by the authorized personnel. Alternatively the code may be biometric data which retains a lifelong distinctive identity of the authorized personnel. This document does not however disclose the recordal of an image by a camera in the direction in which a shot is in used fired or the recordal of a sound at about a time when a shot is in used fired.

International patent application number PCT/US93/10156 discloses a lightenergy initiated firing system for a firearm. Optical light-conducting fibres extend from a source of high frequency energy to adjacent a cartridge so that the energy passing through the fibres will pass into the cartridge and initiate a propellant in the cartridge. The firearm cartridge includes an ignition composition (a primer) positioned forward of at least part of the propellant.

High frequency energy such as laser energy passes into the cartridge and initiates the forward-positioned propellant. The system includes safety means for\_interupting the energy path. Again this document does not disclose recordal of an image or a sound at the time when a shot is in use fired.

20 United States patent 4,309,095 discloses a camera mounting device for mounting a camera to a hunting rifle. The camera is mechanically operated

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when a trigger for the rifle is pulled and a digital camera is not disclosed. The camera of United States patent number 4,309,095 is also attached to the rifle or a telescope for the rifle and is not integral with the rifle or firearm used. The taking of a photograph is not a precondition for the firing of the rifle disclosed in United States patent 4,309,095.

### Disclosure of the Invention

According to the present invention a firearm device comprises

10 - a firearm;

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safety means for impeding an unauthorised person to fire the firearm; and

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#### **CLAIMS**

- 1. A a firearm device (10) comprising
- 5 a firearm;

- safety means (22, 25, 28) for impeding an unauthorised person to fire the firearm; and
- information storage means (23, 31, 32) for recording and storing at least one aspect of the group consisting of an image in the direction in which a shot is in use fired, and a sound at about the time when a shot is in use fired.
  - 2. The device of claim 1 wherein the firearm comprises a conventional firearm and wherein the information storage means stores a unique code relating to each projectile fired.
    - 3. The device of claim 1 wherein the firearm includes a laser system (39) for generating a laser beam to ignite a charge to fire a projectile.
- 4. The device of claim 3 wherein the firearm includes an electronic system for controlling firing of the firearm.

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5. The device of claim 3 wherein the firearm includes a number of barrels
(13) and wherein the barrels (13) are pre-loaded with projectiles and charges, which

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charges are ignitable by means of a laser beam.

- The device of claim 1 wherein the safety means comprises an information carrier and/or gathering means (25, 28); and a processing means (22) for processing information received from the information carrier and/or gathering means and allowing firing of the firearm to take place only if the information so received complies with certain requirements.
- The device of claim 6 wherein the information carrier and/or gathering 10 means includes an information carrier means whereupon information can be recorded.
  - 8. The device of claim 7 wherein the carrier means comprises a card.
- The device of claim 8 wherein the card has information recorded thereon 15 in respect of physical information of the authorised user for identifying said user.
- 10. The device of claim 9 wherein the physical information comprises a 20 fingerprint.

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- 11. The device of claim 7 wherein the safety means (22, 25, 28) includes reading means for reading information on the information carrier means.
- 12. The device of claim 6 wherein the information carrier and/or gathering means (25, 28) includes information gathering means for gathering certain physical information from the person to use the firearm, whereby said person can be identified.
- 13. The device of claim 12 in which the information gathering means (25, 28)
  10 is located on an operatively rear surface of a grip member of the device.
  - 14. The device of claim 12 wherein the gathering means (25, 28) comprises means for recording a fingerprint of the person to use the firearm.
- 15. The device of claim 14 in which the means for recording a fingerprint is located on an operatively rear side of a grip member of the device.
- 16. The device of claim 15 in which the gathering means is located on the device such that a fingerprint of a user of the device can be recorded when20 the device is located in a holster therefor.

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REPLACEMENT PAGE

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- 17. The device of claim 6 wherein the information carrier and/or gathering means (25, 28) includes both an information carrier means and an information gathering means.
- The device of claim 6 wherein the processing means includes a memory means (23, 24) for storing information therein and the processing means in use comparing information received from the information carrier and/or gathering means (25, 28) with information on the memory means and only allowing firing to take place if the information corresponds.

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- 19. The device of claim 1 wherein the information storage means (23, 24) is connected to at least one device of the group consisting of a digital camera (32) for recording images, a microphone for recording sound, a timepiece for recording time, and a GPS for recording position in the form of geographical co-ordinates; and the information storage means is arranged to store data from the said at least one device.
- 20. The device of claim 19 which includes a digital camera (32) and a timepiece (42).
  - 21. The device of claim 20 wherein the digital camera (32) is mounted to face along the barrel (12) defined by the firearm, thereby allowing it to record an image in the direction in which a shot is in use fired.

22. The device of claim 20 wherein the timepiece comprises a real time clock (42).

- 23. A firearm device comprising
- 20 firearm; and
  - safety means (22, 25, 28) being characterised therein that it

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comprises an information carrier and gathering means (25, 28) defining an information carrier means (25) separable form the firearm device whereon information can be recorded, and an information gathering means (26, 28)

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for gathering information from the person to use the firearm; and the safety means further comprising processing means (22) for processing information received from the information carrier and gathering means (25, 28) and allowing firing of the firearm to take place only if the information so received complies with certain requirements, and recording at least one aspect of the group consisting of an image in the direction in which a shot is in used fired, a sound at about the time when a shot is in used fired.

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# WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



#### INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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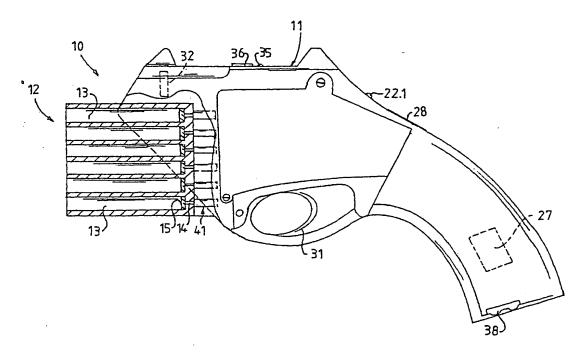
- (75) Inventor/Applicant (for US only): VAN ZYL, Nicolaas, Cornelius [ZA/ZA]; 11 Bloekom Avenue, Visagie Park, 1490 Nigel (ZA).
- (74) Agent: D.M. KISCH INC.; P.O. Box 781218, 2146 Sandton (ZA).

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(54) Title: FIREARM



(57) Abstract

According to the present invention a firearm device comprises a firearm; safety means for impeding an unauthorised person to fire the firearm; and information storage means for recording and storing at least one aspect of the group consisting of an image in the direction in which a shot is in use fired, sound at about the time when a shot is in use fired, and location of the firearm.



In: Ational Application No PCT/ZA 00/00022

A. CLASS	FICATION OF SUBJECT MATTER
IPC 7	F41A17/06

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7-F41A

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUM	ENTS CONSIDERED TO BE RELEVANT	
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 55817 A (DWYER JAMES MICHAEL O) 10 December 1998 (1998-12-10) page 2, line 19 -page 4, line 3; claims 6,7,9	1,2, 6-16,20
Υ	page 5, line 31 -page 6, line 29	3-5, 17-19
Υ	WO 95 11419 A (COLT S MFG CO) 27 April 1995 (1995-04-27) * abstract *	3-5
Y	US 4 309 095 A (BUCKLEY FREDERICK P) 5 January 1982 (1982-01-05) column 2, line 17-33; figure 1 column 3, line 22-45	17-19
	-/	

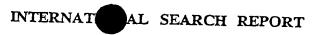
X Further documents are listed in the continuation of box C.	X Patent family members are listed in annex.
*Special categories of cited documents:  "A" document defining the general state of the art which is not considered to be of particular relevance  "E" earlier document but published on or after the international filing date  "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  "O" document referring to an oral disclosure, use, exhibition or other means  "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art."  "&" document member of the same patent family
Date of the actual completion of the international search  10 April 2000	Date of mailing of the international search report  17/04/2000
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  Fax: (+31-70) 340-3016	Authorized officer  Van der Plas, J



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C 10	DOOUNT TO COMMENT	PCT/ZA O	
<del></del>	etion) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category <sup>-</sup>	Citation of document, with indication, where appropriate, of the relevant passages		Relevant to claim No.
P,X	DE 198 31 690 A (LAUSTER PETER; BREINLINGER HARALD (DE)) 23 September 1999 (1999-09-23) column 3, line 5-34; figures 1,2		1,2, 6-16,20
X .	US 5 502 915 A (MENDELSOHN EDDIE S ET AL) 2 April 1996 (1996-04-02) column 1, line 38 -column 2, line 41; figures 1-9 column 3, line 26-36 column 4, line 1-41 column 4, line 60 -column 5, line 23 column 6, line 43 -column 7, line 9 column 7, line 65 -column 8, line 28		1,2, 6-16,20
A	US 5 603 179 A (ADAMS HEIKO B) 18 February 1997 (1997-02-18)		
۹	US 5 636 464 A (CILUFFO GARY) 10 June 1997 (1997-06-10)		
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Form PCT/ISA/210 (continuation of second sheet) (July 1992)



Information on patent family members

Int Aional Application No PCT/ZA 00/00022

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DE	19831690	A	23-09-1999	AU WO	3253299 A 9946551 A	27-09-1999 16-09-1999
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US!	5636464	Α	10-06-1997	NONE		



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09/890669 JC05 Rec'd PCT/PTO 0 3 AUG 200V

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## <u>FIREARM</u>

#### Technical Field

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This invention relates to a firearm device.

### Background Art

10 It is well known that firearms are often misused, not only by unauthorised users, but also by owners of the firearms. This misuse leads to opposition to the use and carry of firearms. There is accordingly a great need for a firearm that is less attractive to be stolen, and more difficult to be used by unauthorised persons. At the same time it would also be a huge advantage if the firearm could in some way discourage misuse thereof.

### Disclosure of the Invention

According to the present invention a figearm device comprises

- 20 a firearm;
  - safety means for impeding an unauthorised person to fire the firearm; and

#### CLAIMS

- 1. A a firearm device comprising
- a firearm;
- 5 safety means for impeding an unauthorised person to fire the firearm; and
  - information storage means for recording and storing at least one aspect of the group consisting of an image in the direction in which a shot is in use fired, sound at about the time when a shot is in use fired, time when a shot is in use fired, and location of the firearm.

- 2. The device of claim 1 wherein the firearm comprises a conventional firearm.
- 3. The device of claim 1 wherein the firearm includes a laser system for15 generating a laser beam to ignite a charge to fire a projectile.
  - 4. The device of claim 3 wherein the firearm includes an electronic system for controlling firing of the firearm.
- 20 5. The device of claim 3 wherein the firearm includes a number of barrels and wherein the barrels are pre-loaded with projectiles and charges, which

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charges are ignitable by means of a laser beam.

- 6. The device of claim 1 wherein the safety means comprises an information carrier and/or gathering means; and a processing means for processing information received from the information carrier and/or gathering means and allowing firing of the firearm to take place only if the information so received complies with certain requirements.
- 7. The device of claim 6 wherein the information carrier and/or gathering
   10 means includes an information carrier means whereupon information can be recorded.
  - 8. The device of claim 7 wherein the carrier means comprises a card.
- 9. The device of claim 8 wherein the card has information recorded thereon in respect of physical information of the authorised user for identifying said user.
- 10. The device of claim 9 wherein the physical information comprises a20 fingerprint.

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11. The device of claim 7 wherein the safety means includes reading means for reading information on the information carrier means.

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- 12. The device of claim 6 wherein the information carrier and/or gathering means includes information gathering means for gathering certain physical information from the person to use the firearm, whereby said person can be identified.
- 13. The device of claim 12 wherein the gathering means comprises means for
  10 recording a fingerprint of the person to use the firearm.
  - 14. The device of claim 6 wherein the information carrier and/or gathering means includes both an information carrier means and an information gathering means.

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15. The device of claim 6 wherein the processing means includes a memory means for storing information therein and the processing means in use comparing information received from the information carrier and/or gathering means with information on the memory means and only allowing firing to take place if the information corresponds.

- 16. The device of claim 1 wherein the information storage means comprises at least one device of the group consisting of a camera for recording images, a microphone for recording sound, a timepiece for recording time, and a GPS for recording position in the form of geographical coordinates; and the information storage means further comprising storage means for storing data from the said at least one device.
- 17. The device of claim 16 which includes a camera and a timepiece.
- 10 18. The device of claim 17 wherein the camera is mounted to face along the barrel defined by the firearm, thereby allowing it to record an image in the direction in which a shot is in use fired.
  - 19. The device of claim 17 wherein the timepiece comprises a real time clock.
  - 20. A firearm device comprising
    - firearm; and

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- safety means being characterised therein that it comprises an information carrier and gathering means defining an information carrier means separable form the firearm device whereon information can be recorded, and an information gathering means

for gathering information from the person to use the firearm; and the safety means further comprising processing means for processing information received from the information carrier and gathering means and allowing firing of the firearm to take place only if the information so received complies with certain requirements.